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From: Robert Law
Sent: Thur 11/29/2012 3:27:44 AM
Subject: HV 10L samples
Mega-TALEX IPR_EDL Study.pdf.pdf
Mega-TALEX.pdf.pdf

AECOM has consulted with their laboratories and other laboratories regarding EPA's request for 10L post-PUF aqueous sample analysis of PCBs and PCDD/Fs.

The SV CWCM program uses Analytical Perspectives (AP) for PCDD/Fs using a carbon SPE extraction of 1L samples. This can be scaled up by AP to 10L.

The PCBs are analyzed by TestAmerica (TA) using 1L extractions in a separatory funnel. This cannot be scaled up to 10L without additional method development.

Vista Analytical was consulted based on their involvement in the Tierra CSO program. The SOPs and MDLs developed for that program, using 5L (not 10L) samples, are proprietary and Vista would need to develop them for the HV QAPP using 10L samples.

There is no easy way to analyze PCBs in 10L aliquots. The 10L sample can be split and analyzed in 2L subsamples. Larger volumes can be subject to continuous liquid-liquid extraction, but the chance for background PCB contamination becomes of utmost concern, potentially creating false positive results.

AP has a method using temperature assisted liquid extraction (TALEX). The SOP and detection limits (MDLs and EDLs) for both PCBs and PCDD/Fs are attached to this email. This TALEX method is beneficial for several reasons:

1. PCBs and PCDD/Fs can be analyzed from the same extraction
2. The constituents would be analyzed by AP, the same lab running the analyses for the solids and PUF samples.
3. It is more cost-effective than other methods.
4. It is a "closed" system which significantly reduces potential for background contamination.
5. SOPs, IDOC, and MDL data are currently available for all 2,3,7,8-PCDD/F isomers and 12 representative PCB congeners.
6. This technique has been successfully used by AP on other projects. It is not experimental.

AECOM has reviewed the MDLs and recommends using AP's TALEX is the best option for the CPG's 10L post PUF filtrate sample analysis of both PCDD/Fs and PCBs.

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